

# LISTE DE SEQUENCES

<110> AVENTIS PHARMA SA

<120> Procédé d'obtention de lignées de mastocytes

<130> MASTOCYTES

<140>

<141>

<160> 34

<170> PatentIn Ver. 2.1

<210> 1

<211> 3952

<212> ADN

<213> Sus scrofa

<220>

<221> CDS

<222> (118)..(3036)

<400> 1

attggggccga cgtcgcatgc tcccggccgg ccgccatntc ngccgcggga aattcgattg 60

gaattcctcg agagcaggaa cgtggaaagg agctccggtc ccagagcagc caccgcg 117

atg aga ggc gct cgc cgc gcc tgg gat ttt ctc ttc gtc ctg cag ctc 165  
Met Arg Gly Ala Arg Arg Ala Trp Asp Phe Leu Phe Val Leu Gln Leu  
1 5 10 15

ttg ctt cgc gtc cag aca ggc tct tct cag cca tct gtg agt cca gag 213  
Leu Leu Arg Val Gln Thr Gly Ser Ser Gln Pro Ser Val Ser Pro Glu  
20 25 30

gaa ctg tct cca cca tcc atc cag cca gca aaa tca gag tta atc gtc 261  
Glu Leu Ser Pro Pro Ser Ile Gln Pro Ala Lys Ser Glu Leu Ile Val  
35 40 45

agt gct ggc gat gag att agg ctg ttc tgc acc gat cca gga tct gtc 309  
Ser Ala Gly Asp Glu Ile Arg Leu Phe Cys Thr Asp Pro Gly Ser Val  
50 55 60

aaa tgg act ttt gag acc ctg ggt cag ctg agt gag aat act cac gca 357  
Lys Trp Thr Phe Glu Thr Leu Gly Gln Leu Ser Glu Asn Thr His Ala  
65 70 75 80

gag tgg atc gtg gag aaa gca gag gcc atg aat aca ggc aat tat aca	405
Glu Trp Ile Val Glu Lys Ala Glu Ala Met Asn Thr Gly Asn Tyr Thr	
85 90 95	
tgc acc aat gaa ggc ggt tta agc agt tcc att tat gtg ttt gtt aga	453
Cys Thr Asn Glu Gly Gly Leu Ser Ser Ser Ile Tyr Val Phe Val Arg	
100 105 110	
gat cct gag aag ctt ttc ctc gtc gac cct ccc ttg tat ggg aag gag	501
Asp Pro Glu Lys Leu Phe Leu Val Asp Pro Pro Leu Tyr Gly Lys Glu	
115 120 125	
gac aat gac gcg ctg gtc cgc tgt cct ctg acg gac cca gag gtg acc	549
Asp Asn Asp Ala Leu Val Arg Cys Pro Leu Thr Asp Pro Glu Val Thr	
130 135 140	
aat tac tcc ctc acg ggc tgc gag ggg aaa ccc ctt ccc aag gat ttg	597
Asn Tyr Ser Leu Thr Gly Cys Glu Gly Lys Pro Leu Pro Lys Asp Leu	
145 150 155 160	
acc ttc gtt gca gac ccc aag gcc ggc atc acc atc aaa aat gtg aag	645
Thr Phe Val Ala Asp Pro Lys Ala Gly Ile Thr Ile Lys Asn Val Lys	
165 170 175	
cgc gag tat cat cgg ctg tgt cta cac tgc tcc gcc aac cag ggg ggc	693
Arg Glu Tyr His Arg Leu Cys Leu His Cys Ser Ala Asn Gln Gly Gly	
180 185 190	
aag tcc gtg ctg tcg aag aaa ttc acc ctg aaa gtg agg gca gcc atc	741
Lys Ser Val Leu Ser Lys Lys Phe Thr Leu Lys Val Arg Ala Ala Ile	
195 200 205	
aga gct gta cct gtt gtg gct gtg tcc aaa gca agc tac ctt ctc agg	789
Arg Ala Val Pro Val Val Ala Val Ser Lys Ala Ser Tyr Leu Leu Arg	
210 215 220	
gaa ggg gag gaa ttt gcc gtg atg tgc ttg atc aaa gac gtg tct agt	837
Glu Gly Glu Glu Phe Ala Val Met Cys Leu Ile Lys Asp Val Ser Ser	
225 230 235 240	
tcc gtg gac tcc atg tgg atc agg gag aac agc cag act aaa gca cag	885
Ser Val Asp Ser Met Trp Ile Arg Glu Asn Ser Gln Thr Lys Ala Gln	
245 250 255	
gtg aag agg aat agc tgg cat cag ggt gac ttc aat ttt ctg cgg cag	933
Val Lys Arg Asn Ser Trp His Gln Gly Asp Phe Asn Phe Leu Arg Gln	
260 265 270	

gaa agg ctg aca atc agc tca gca aga gtt aat gat tct ggc gtg ttc	981
Glu Arg Leu Thr Ile Ser Ser Ala Arg Val Asn Asp Ser Gly Val Phe	
275 280 285	
atg tgt tac gcc aat aat act ttt gga tct gca aat gtc aca acc acc	1029
Met Cys Tyr Ala Asn Asn Thr Phe Gly Ser Ala Asn Val Thr Thr Thr	
290 295 300	
tta gaa gta gta gat aaa gga ttc att aat atc ttc cct atg atg aat	1077
Leu Glu Val Val Asp Lys Gly Phe Ile Asn Ile Phe Pro Met Met Asn	
305 310 315 320	
acc act gtg ttt gta aac gat gga gag gat gtg gat cta att gtt gag	1125
Thr Thr Val Phe Val Asn Asp Gly Glu Asp Val Asp Leu Ile Val Glu	
325 330 335	
tac gag gcg tac ccc aaa cct gaa cac cga cag tgg ata tat atg aac	1173
Tyr Glu Ala Tyr Pro Lys Pro Glu His Arg Gln Trp Ile Tyr Met Asn	
340 345 350	
cgc act gcc act gat aag tgg gag gat tat ccc aag tct gag aat gaa	1221
Arg Thr Ala Thr Asp Lys Trp Glu Asp Tyr Pro Lys Ser Glu Asn Glu	
355 360 365	
agt aac atc aga tat gta agt gaa ctt cac ttg acc aga tta aaa ggg	1269
Ser Asn Ile Arg Tyr Val Ser Glu Leu His Leu Thr Arg Leu Lys Gly	
370 375 380	
acc gaa gga ggc act tac aca ttt ctc gtg tcc aat gct gat gtc aat	1317
Thr Glu Gly Gly Thr Tyr Thr Phe Leu Val Ser Asn Ala Asp Val Asn	
385 390 395 400	
tct tct gtg aca ttt aat gtt tac gtg aac aca aaa cca gaa atc ctg	1365
Ser Ser Val Thr Phe Asn Val Tyr Val Asn Thr Lys Pro Glu Ile Leu	
405 410 415	
act cat gac agg ctc atg aac ggc atg ctc cag tgt gtg gcg gca ggc	1413
Thr His Asp Arg Leu Met Asn Gly Met Leu Gln Cys Val Ala Ala Gly	
420 425 430	
ttc cca gag ccc acc atc gat tgg tat ttc tgt cca ggc acc gag cag	1461
Phe Pro Glu Pro Thr Ile Asp Trp Tyr Phe Cys Pro Gly Thr Glu Gln	
435 440 445	
aga tgt tcc gtt ccc gtt ggg cca gtg gac gtg cag atc caa aac tca	1509
Arg Cys Ser Val Pro Val Gly Pro Val Asp Val Gln Ile Gln Asn Ser	
450 455 460	

tct gta tca ccg ttt gga aaa cta gtg att cac agc tcc att gat tac	1557
Ser Val Ser Pro Phe Gly Lys Leu Val Ile His Ser Ser Ile Asp Tyr	
465 470 475 480	
agt gca ttc aaa cac aac ggc acg gtg gag tgc agg gct tac aac gat	1605
Ser Ala Phe Lys His Asn Gly Thr Val Glu Cys Arg Ala Tyr Asn Asp	
485 490 495	
gtg ggc aag agt tct gcc ttt ttt aac ttt gca ttt aaa gaa caa atc	1653
Val Gly Lys Ser Ser Ala Phe Phe Asn Phe Ala Phe Lys Glu Gln Ile	
500 505 510	
cat gcc cac acc ctc ttc acg cct ttg ctg att ggt ttt gtg atc gca	1701
His Ala His Thr Leu Phe Thr Pro Leu Leu Ile Gly Phe Val Ile Ala	
515 520 525	
gcg ggt atg atg tgt atc atc gtg atg att ctc acc tat aaa tat cta	1749
Ala Gly Met Met Cys Ile Ile Val Met Ile Leu Thr Tyr Lys Tyr Leu	
530 535 540	
cag aag ccc atg tat gaa gta cag tgg aag gtt gtc gag gag ata aat	1797
Gln Lys Pro Met Tyr Glu Val Gln Trp Lys Val Val Glu Glu Ile Asn	
545 550 555 560	
gga aac aat tat gtc tac ata gac cca acg caa ctt cct tat gat cac	1845
Gly Asn Asn Tyr Val Tyr Ile Asp Pro Thr Gln Leu Pro Tyr Asp His	
565 570 575	
aaa tgg gaa ttt ccc agg aac agg ctg agt ttt ggc aaa acc ttg ggt	1893
Lys Trp Glu Phe Pro Arg Asn Arg Leu Ser Phe Gly Lys Thr Leu Gly	
580 585 590	
gct ggc gcc ttc ggg aaa gtc gtt gag gcc act gca tac ggc tta att	1941
Ala Gly Ala Phe Gly Lys Val Val Glu Ala Thr Ala Tyr Gly Leu Ile	
595 600 605	
aag tca gat gcg gcc atg acc gtt gcc gtg aag atg ctc aaa cca agt	1989
Lys Ser Asp Ala Ala Met Thr Val Ala Val Lys Met Leu Lys Pro Ser	
610 615 620	
gcc cat tta acg gaa cga gaa gcc ctg atg tct gaa ctc aaa gtc tta	2037
Ala His Leu Thr Glu Arg Glu Ala Leu Met Ser Glu Leu Lys Val Leu	
625 630 635 640	
agt tac ctc ggt aat cac atg aat att gtg aat ctt ctc ggc gcc tgc	2085
Ser Tyr Leu Gly Asn His Met Asn Ile Val Asn Leu Leu Gly Ala Cys	
645 650 655	

acc att gga ggg ccc acc ctg gtc att aca gaa tat tgt tgc tat ggt 2133  
 Thr Ile Gly Gly Pro Thr Leu Val Ile Thr Glu Tyr Cys Cys Tyr Gly  
 660 665 670

gat ctc ctg aat ttt ttg aga cgg aaa cgt gat tcg ttt att tgc tca 2181  
 Asp Leu Leu Asn Phe Leu Arg Arg Lys Arg Asp Ser Phe Ile Cys Ser  
 675 680 685

aag cag gaa gat cac gca gaa gcg gcg ctt tat aag aac ctt ctg cat 2229  
 Lys Gln Glu Asp His Ala Glu Ala Ala Leu Tyr Lys Asn Leu Leu His  
 690 695 700

tca aag gag tct tcc tgc agt gac agt act aac gag tac atg gac atg 2277  
 Ser Lys Glu Ser Ser Cys Ser Asp Ser Thr Asn Glu Tyr Met Asp Met  
 705 710 715 720

aaa ccc gga gtg tct tat gtg gta cca acc aag gca gac aaa agg aga 2325  
 Lys Pro Gly Val Ser Tyr Val Val Pro Thr Lys Ala Asp Lys Arg Arg  
 725 730 735

tct gcg aga ata ggc tca tac ata gaa cga gat gtg act cct gcc atc 2373  
 Ser Ala Arg Ile Gly Ser Tyr Ile Glu Arg Asp Val Thr Pro Ala Ile  
 740 745 750

atg gaa gat gat gag ttg gcc cta gac ctg gag gac ttg ctc agc ttt 2421  
 Met Glu Asp Asp Glu Leu Ala Leu Asp Leu Glu Asp Leu Leu Ser Phe  
 755 760 765

tct tac caa gtg gca aag ggc atg gcc ttc ctc gcc tcg aag aat tgt 2469  
 Ser Tyr Gln Val Ala Lys Gly Met Ala Phe Leu Ala Ser Lys Asn Cys  
 770 775 780

att cac aga gac ttg gcg gcc aga aat atc ctc ctt act cat ggt cga 2517  
 Ile His Arg Asp Leu Ala Ala Arg Asn Ile Leu Leu Thr His Gly Arg  
 785 790 795 800

atc aca aag att tgt gat ttt ggt cta gcc aga gac atc aag aat gat 2565  
 Ile Thr Lys Ile Cys Asp Phe Gly Leu Ala Arg Asp Ile Lys Asn Asp  
 805 810 815

tct aat tac gtg gtc aaa gga aac gct cgg cta ccc gtg aag tgg atg 2613  
 Ser Asn Tyr Val Val Lys Gly Asn Ala Arg Leu Pro Val Lys Trp Met  
 820 825 830

gca ccc gag agc att ttc aac tgt gtc tac aca ttt gaa agc gat gtc 2661  
 Ala Pro Glu Ser Ile Phe Asn Cys Val Tyr Thr Phe Glu Ser Asp Val  
 835 840 845

tgg tcc tat ggg att ttt ctg tgg gag ctc ttc tct tta ggg agc agc 2709  
 Trp Ser Tyr Gly Ile Phe Leu Trp Glu Leu Phe Ser Leu Gly Ser Ser  
 850 855 860

ccc tac cct gga atg cca gtt gat tct aaa ttc tac aag atg atc aag 2757  
 Pro Tyr Pro Gly Met Pro Val Asp Ser Lys Phe Tyr Lys Met Ile Lys  
 865 870 875 880

gag ggt ttc cga atg ctc agt cct gag cat gca cct gcg gaa atg tat 2805  
 Glu Gly Phe Arg Met Leu Ser Pro Glu His Ala Pro Ala Glu Met Tyr  
 885 890 895

gac atc atg aag act tgc tgg gat gcg gat ccc ctc aaa aga cca acg 2853  
 Asp Ile Met Lys Thr Cys Trp Asp Ala Asp Pro Leu Lys Arg Pro Thr  
 900 905 910

ttt aag cag att gtg cag ctg att gag aag cag att tcg gag agc acc 2901  
 Phe Lys Gln Ile Val Gln Leu Ile Glu Lys Gln Ile Ser Glu Ser Thr  
 915 920 925

aat cac att tat tcc aac tta gcg aac tgc agc ccc cac cgg gag aac 2949  
 Asn His Ile Tyr Ser Asn Leu Ala Asn Cys Ser Pro His Arg Glu Asn  
 930 935 940

ccc gcg gtg gat cat tct gtg cgg atc aac tcc gtg ggc agc agt gcc 2997  
 Pro Ala Val Asp His Ser Val Arg Ile Asn Ser Val Gly Ser Ser Ala  
 945 950 955 960

tcc tcc acg cag ccg ctg ctt gtc cac gaa gac gtc tga agcagaatgg 3046  
 Ser Ser Thr Gln Pro Leu Leu Val His Glu Asp Val  
 965 970

gtgtccgggg tggggggtgg gggggctcct cccccacagc accggcctac tgccattctt 3106

tttggttttc ataatggta ttttggttcc ctccaacttg cactcctactc cagggtagtg 3166

gatgctccgc tgtaatectc tttagcagca cacttttagtg gccaatgatt tttgtcatca 3226

gctgccattg agctgtatat gttcccaata gcacgctagc ccccataac ggagagcatt 3286

cagacttagg gaagaggagg gtaggacggg ctggacaccc caggtccttg acaagtcttc 3346

tccagtttct gtccaataag tgctgtaatg gtttatttga gcacctggct gtcgtcacct 3406

ccggtccttg tcatcatctg taacaatatg atgatgatga tgccagaacc taatcccttg 3466

atgtggaaaa taggatgta atcaaacaaa gggcagaaa aagcctgtga ctatctgggc 3526

tcgagaagtc aagtatttca tgctgggagt aagacgtaag ccatggaaaa atgctctccg 3586  
 ggcatagaata aggctgctgg ccatgagcct ttttactcct gacctggttt ntaagtagtt 3646  
 tggtatttagg gagctggatc ggagggaagg cttctgctg cattttgtat atactcatct 3706  
 ataaattggt catgttcaca tatttgaggg gggaaaaccc gcaaggtgta gtttctggat 3766  
 acaatcctgg ctgagtcctg ctgcgtgtag aaatagctga agagccagac acgtttgaag 3826  
 gaaacagtgc tttttttaag aaaaaaaaaa aaaaaagtcg acatcgatac gcgtgggtcaa 3886  
 tcactagtga attcgcggcc gcctgcaggt cgaccanaag gagagctccc aacgcgtgga 3946  
 gcaagc 3952

<210> 2  
 <211> 972  
 <212> PRT  
 <213> Sus scrofa

<400> 2  
 Met Arg Gly Ala Arg Arg Ala Trp Asp Phe Leu Phe Val Leu Gln Leu  
 1 5 10 15  
 Leu Leu Arg Val Gln Thr Gly Ser Ser Gln Pro Ser Val Ser Pro Glu  
 20 25 30  
 Glu Leu Ser Pro Pro Ser Ile Gln Pro Ala Lys Ser Glu Leu Ile Val  
 35 40 45  
 Ser Ala Gly Asp Glu Ile Arg Leu Phe Cys Thr Asp Pro Gly Ser Val  
 50 55 60  
 Lys Trp Thr Phe Glu Thr Leu Gly Gln Leu Ser Glu Asn Thr His Ala  
 65 70 75 80  
 Glu Trp Ile Val Glu Lys Ala Glu Ala Met Asn Thr Gly Asn Tyr Thr  
 85 90 95  
 Cys Thr Asn Glu Gly Gly Leu Ser Ser Ser Ile Tyr Val Phe Val Arg  
 100 105 110  
 Asp Pro Glu Lys Leu Phe Leu Val Asp Pro Pro Leu Tyr Gly Lys Glu  
 115 120 125

Asp Asn Asp Ala Leu Val Arg Cys Pro Leu Thr Asp Pro Glu Val Thr  
 130 135 140

Asn Tyr Ser Leu Thr Gly Cys Glu Gly Lys Pro Leu Pro Lys Asp Leu  
 145 150 155 160

Thr Phe Val Ala Asp Pro Lys Ala Gly Ile Thr Ile Lys Asn Val Lys  
 165 170 175

Arg Glu Tyr His Arg Leu Cys Leu His Cys Ser Ala Asn Gln Gly Gly  
 180 185 190

Lys Ser Val Leu Ser Lys Lys Phe Thr Leu Lys Val Arg Ala Ala Ile  
 195 200 205

Arg Ala Val Pro Val Val Ala Val Ser Lys Ala Ser Tyr Leu Leu Arg  
 210 215 220

Glu Gly Glu Glu Phe Ala Val Met Cys Leu Ile Lys Asp Val Ser Ser  
 225 230 235 240

Ser Val Asp Ser Met Trp Ile Arg Glu Asn Ser Gln Thr Lys Ala Gln  
 245 250 255

Val Lys Arg Asn Ser Trp His Gln Gly Asp Phe Asn Phe Leu Arg Gln  
 260 265 270

Glu Arg Leu Thr Ile Ser Ser Ala Arg Val Asn Asp Ser Gly Val Phe  
 275 280 285

Met Cys Tyr Ala Asn Asn Thr Phe Gly Ser Ala Asn Val Thr Thr Thr  
 290 295 300

Leu Glu Val Val Asp Lys Gly Phe Ile Asn Ile Phe Pro Met Met Asn  
 305 310 315 320

Thr Thr Val Phe Val Asn Asp Gly Glu Asp Val Asp Leu Ile Val Glu  
 325 330 335

Tyr Glu Ala Tyr Pro Lys Pro Glu His Arg Gln Trp Ile Tyr Met Asn  
 340 345 350

Arg Thr Ala Thr Asp Lys Trp Glu Asp Tyr Pro Lys Ser Glu Asn Glu  
 355 360 365

Ser Asn Ile Arg Tyr Val Ser Glu Leu His Leu Thr Arg Leu Lys Gly  
 370 375 380



Thr Glu Gly Gly Thr Tyr Thr Phe Leu Val Ser Asn Ala Asp Val Asn  
 385 390 395 400  
 Ser Ser Val Thr Phe Asn Val Tyr Val Asn Thr Lys Pro Glu Ile Leu  
 405 410 415  
 Thr His Asp Arg Leu Met Asn Gly Met Leu Gln Cys Val Ala Ala Gly  
 420 425 430  
 Phe Pro Glu Pro Thr Ile Asp Trp Tyr Phe Cys Pro Gly Thr Glu Gln  
 435 440 445  
 Arg Cys Ser Val Pro Val Gly Pro Val Asp Val Gln Ile Gln Asn Ser  
 450 455 460  
 Ser Val Ser Pro Phe Gly Lys Leu Val Ile His Ser Ser Ile Asp Tyr  
 465 470 475 480  
 Ser Ala Phe Lys His Asn Gly Thr Val Glu Cys Arg Ala Tyr Asn Asp  
 485 490 495  
 Val Gly Lys Ser Ser Ala Phe Phe Asn Phe Ala Phe Lys Glu Gln Ile  
 500 505 510  
 His Ala His Thr Leu Phe Thr Pro Leu Leu Ile Gly Phe Val Ile Ala  
 515 520 525  
 Ala Gly Met Met Cys Ile Ile Val Met Ile Leu Thr Tyr Lys Tyr Leu  
 530 535 540  
 Gln Lys Pro Met Tyr Glu Val Gln Trp Lys Val Val Glu Glu Ile Asn  
 545 550 555 560  
 Gly Asn Asn Tyr Val Tyr Ile Asp Pro Thr Gln Leu Pro Tyr Asp His  
 565 570 575  
 Lys Trp Glu Phe Pro Arg Asn Arg Leu Ser Phe Gly Lys Thr Leu Gly  
 580 585 590  
 Ala Gly Ala Phe Gly Lys Val Val Glu Ala Thr Ala Tyr Gly Leu Ile  
 595 600 605  
 Lys Ser Asp Ala Ala Met Thr Val Ala Val Lys Met Leu Lys Pro Ser  
 610 615 620  
 Ala His Leu Thr Glu Arg Glu Ala Leu Met Ser Glu Leu Lys Val Leu  
 625 630 635 640

Ser Tyr Leu Gly Asn His Met Asn Ile Val Asn Leu Leu Gly Ala Cys  
 645 650 655  
 Thr Ile Gly Gly Pro Thr Leu Val Ile Thr Glu Tyr Cys Cys Tyr Gly  
 660 665 670  
 Asp Leu Leu Asn Phe Leu Arg Arg Lys Arg Asp Ser Phe Ile Cys Ser  
 675 680 685  
 Lys Gln Glu Asp His Ala Glu Ala Ala Leu Tyr Lys Asn Leu Leu His  
 690 695 700  
 Ser Lys Glu Ser Ser Cys Ser Asp Ser Thr Asn Glu Tyr Met Asp Met  
 705 710 715 720  
 Lys Pro Gly Val Ser Tyr Val Val Pro Thr Lys Ala Asp Lys Arg Arg  
 725 730 735  
 Ser Ala Arg Ile Gly Ser Tyr Ile Glu Arg Asp Val Thr Pro Ala Ile  
 740 745 750  
 Met Glu Asp Asp Glu Leu Ala Leu Asp Leu Glu Asp Leu Leu Ser Phe  
 755 760 765  
 Ser Tyr Gln Val Ala Lys Gly Met Ala Phe Leu Ala Ser Lys Asn Cys  
 770 775 780  
 Ile His Arg Asp Leu Ala Ala Arg Asn Ile Leu Leu Thr His Gly Arg  
 785 790 795 800  
 Ile Thr Lys Ile Cys Asp Phe Gly Leu Ala Arg Asp Ile Lys Asn Asp  
 805 810 815  
 Ser Asn Tyr Val Val Lys Gly Asn Ala Arg Leu Pro Val Lys Trp Met  
 820 825 830  
 Ala Pro Glu Ser Ile Phe Asn Cys Val Tyr Thr Phe Glu Ser Asp Val  
 835 840 845  
 Trp Ser Tyr Gly Ile Phe Leu Trp Glu Leu Phe Ser Leu Gly Ser Ser  
 850 855 860  
 Pro Tyr Pro Gly Met Pro Val Asp Ser Lys Phe Tyr Lys Met Ile Lys  
 865 870 875 880  
 Glu Gly Phe Arg Met Leu Ser Pro Glu His Ala Pro Ala Glu Met Tyr  
 885 890 895

Asp Ile Met Lys Thr Cys Trp Asp Ala Asp Pro Leu Lys Arg Pro Thr  
 900 905 910

Phe Lys Gln Ile Val Gln Leu Ile Glu Lys Gln Ile Ser Glu Ser Thr  
 915 920 925

Asn His Ile Tyr Ser Asn Leu Ala Asn Cys Ser Pro His Arg Glu Asn  
 930 935 940

Pro Ala Val Asp His Ser Val Arg Ile Asn Ser Val Gly Ser Ser Ala  
 945 950 955 960

Ser Ser Thr Gln Pro Leu Leu Val His Glu Asp Val  
 965 970

<210> 3

<211> 8

<212> PRT

<213> Sus scrofa

<400> 3

Pro Leu Leu Val His Glu Asp Val  
 1 5

<210> 4

<211> 936

<212> ADN

<213> Sus scrofa

<220>

<221> CDS

<222> (1)..(936)

<400> 4

atg gcc gcg ctg ctc ctg ggc gcg gtg atg ctg gtc ctt cag ctc cag 48  
 Met Ala Ala Leu Leu Leu Gly Ala Val Met Leu Val Leu Gln Leu Gln  
 1 5 10 15

ctg gtg cct tgc cgc ccc gcc atg ccc ggg gcc ggg ccg agc cag cag 96  
 Leu Val Pro Cys Arg Pro Ala Met Pro Gly Ala Gly Pro Ser Gln Gln  
 20 25 30

gag ctt gtg cgg aaa gcg gcg acc ctc cag gat gag gtc cgg gac agc 144  
 Glu Leu Val Arg Lys Ala Ala Thr Leu Gln Asp Glu Val Arg Asp Ser

35

40

45

gcg gcc ccc aac ggc tcc gtc cag cag ctg ccg cag acc atc atc atc 192  
 Ala Ala Pro Asn Gly Ser Val Gln Gln Leu Pro Gln Thr Ile Ile Ile  
 50 55 60

ggc gtg cgc aag ggc ggg acc cgc gcg ctg ctg gag atg ctc agc ctg 240  
 Gly Val Arg Lys Gly Gly Thr Arg Ala Leu Leu Glu Met Leu Ser Leu  
 65 70 75 80

cat ccc gac gtg gct gct gcg gag aac gag gtg cac ttc ttc gac tgg 288  
 His Pro Asp Val Ala Ala Ala Glu Asn Glu Val His Phe Phe Asp Trp  
 85 90 95

gag gag cat tac agc caa ggc ctg gac tgg tac ctc agc cag atg ccc 336  
 Glu Glu His Tyr Ser Gln Gly Leu Asp Trp Tyr Leu Ser Gln Met Pro  
 100 105 110

ttc tcc tac ccg cac cag ctc acg gtt gaa aag acc ccc gcg tac ttc 384  
 Phe Ser Tyr Pro His Gln Leu Thr Val Glu Lys Thr Pro Ala Tyr Phe  
 115 120 125

acg tcg ccc aaa gtg cct gag cgg gtc cac cgc atg aac ccg tcc atc 432  
 Thr Ser Pro Lys Val Pro Glu Arg Val His Arg Met Asn Pro Ser Ile  
 130 135 140

cgg ctg ctg ctc atc ctg cgg gac ccg tcg gag cgc gtg ctg tcc gac 480  
 Arg Leu Leu Leu Ile Leu Arg Asp Pro Ser Glu Arg Val Leu Ser Asp  
 145 150 155 160

tac acc caa gtg ttc tac aac cac gtg cag aag cac aag ccc tac ccg 528  
 Tyr Thr Gln Val Phe Tyr Asn His Val Gln Lys His Lys Pro Tyr Pro  
 165 170 175

tcc atc gag gag ttc ctg gtg cgc gac ggc cgc ctc aac gtg gac tac 576  
 Ser Ile Glu Glu Phe Leu Val Arg Asp Gly Arg Leu Asn Val Asp Tyr  
 180 185 190

aag gcc ctc aac cga agc ctg tac cac gtg cac atg cag aac tgg ctg 624  
 Lys Ala Leu Asn Arg Ser Leu Tyr His Val His Met Gln Asn Trp Leu  
 195 200 205

cgc ttc ttc ccg ctg cgc cgc atc cac atc gtg gat ggc gac cgc ctc 672  
 Arg Phe Phe Pro Leu Arg Arg Ile His Ile Val Asp Gly Asp Arg Leu  
 210 215 220

atc agg gac cct ttt cct gag atc cag aag gtc gag agg ttc ctg atg 720  
 Ile Arg Asp Pro Phe Pro Glu Ile Gln Lys Val Glu Arg Phe Leu Met

225	230	235	240	
ctg tcg ccg cag atc aac gcc tcg aac ttc tac ttt aac aaa acc aag				768
Leu Ser Pro Gln Ile Asn Ala Ser Asn Phe Tyr Phe Asn Lys Thr Lys				
	245	250	255	
ggc ttt tac tgc ctg cgg gac ggc ggc cgg gac cgc tgc tta cat gag				816
Gly Phe Tyr Cys Leu Arg Asp Gly Gly Arg Asp Arg Cys Leu His Glu				
	260	265	270	
tcc aaa ggc cgg gcg cac ccc cag atc gac ccc aaa ctc ctc aat aaa				864
Ser Lys Gly Arg Ala His Pro Gln Ile Asp Pro Lys Leu Leu Asn Lys				
	275	280	285	
ctg cac gaa tat ttt cat gag cca aat aag aaa ttt ttc gag ctt gtg				912
Leu His Glu Tyr Phe His Glu Pro Asn Lys Lys Phe Phe Glu Leu Val				
	290	295	300	
ggc aga aca ttt gac tgg cac taa				936
Gly Arg Thr Phe Asp Trp His				
305	310			

<210> 5

<211> 311

<212> PRT

<213> Sus scrofa

<400> 5

Met	Ala	Ala	Leu	Leu	Leu	Gly	Ala	Val	Met	Leu	Val	Leu	Gln	Leu	Gln
1			5					10					15		

Leu	Val	Pro	Cys	Arg	Pro	Ala	Met	Pro	Gly	Ala	Gly	Pro	Ser	Gln	Gln
			20					25					30		

Glu	Leu	Val	Arg	Lys	Ala	Ala	Thr	Leu	Gln	Asp	Glu	Val	Arg	Asp	Ser
			35				40					45			

Ala	Ala	Pro	Asn	Gly	Ser	Val	Gln	Gln	Leu	Pro	Gln	Thr	Ile	Ile	Ile
			50				55				60				

Gly	Val	Arg	Lys	Gly	Gly	Thr	Arg	Ala	Leu	Leu	Glu	Met	Leu	Ser	Leu
	65				70					75				80	

His	Pro	Asp	Val	Ala	Ala	Ala	Glu	Asn	Glu	Val	His	Phe	Phe	Asp	Trp
			85					90						95	

Glu	Glu	His	Tyr	Ser	Gln	Gly	Leu	Asp	Trp	Tyr	Leu	Ser	Gln	Met	Pro
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

100	105	110
Phe Ser Tyr Pro His Gln Leu Thr Val Glu Lys Thr Pro Ala Tyr Phe		
115	120	125
Thr Ser Pro Lys Val Pro Glu Arg Val His Arg Met Asn Pro Ser Ile		
130	135	140
Arg Leu Leu Leu Ile Leu Arg Asp Pro Ser Glu Arg Val Leu Ser Asp		
145	150	155 160
Tyr Thr Gln Val Phe Tyr Asn His Val Gln Lys His Lys Pro Tyr Pro		
165	170	175
Ser Ile Glu Glu Phe Leu Val Arg Asp Gly Arg Leu Asn Val Asp Tyr		
180	185	190
Lys Ala Leu Asn Arg Ser Leu Tyr His Val His Met Gln Asn Trp Leu		
195	200	205
Arg Phe Phe Pro Leu Arg Arg Ile His Ile Val Asp Gly Asp Arg Leu		
210	215	220
Ile Arg Asp Pro Phe Pro Glu Ile Gln Lys Val Glu Arg Phe Leu Met		
225	230	235 240
Leu Ser Pro Gln Ile Asn Ala Ser Asn Phe Tyr Phe Asn Lys Thr Lys		
245	250	255
Gly Phe Tyr Cys Leu Arg Asp Gly Gly Arg Asp Arg Cys Leu His Glu		
260	265	270
Ser Lys Gly Arg Ala His Pro Gln Ile Asp Pro Lys Leu Leu Asn Lys		
275	280	285
Leu His Glu Tyr Phe His Glu Pro Asn Lys Lys Phe Phe Glu Leu Val		
290	295	300
Gly Arg Thr Phe Asp Trp His		
305	310	

<210> 6  
 <211> 1236  
 <212> ADN  
 <213> Sus scrofa

<220>

<221> CDS

<222> (1)..(1236)

<400> 6

atg	cgg	cgg	cgg	cgc	gct	ggc	agc	agg	acc	atg	gtt	gag	cgc	gcc	agc	48
Met	Arg	Arg	Arg	Arg	Ala	Gly	Ser	Arg	Thr	Met	Val	Glu	Arg	Ala	Ser	
1				5					10					15		
aag	ttc	gtg	ctg	gtc	gtg	gcg	ggc	tcg	gcg	tgc	ttc	atg	ctc	atc	ctc	96
Lys	Phe	Val	Leu	Val	Val	Ala	Gly	Ser	Ala	Cys	Phe	Met	Leu	Ile	Leu	
		20						25						30		
tac	cag	tac	gcg	ggc	ccg	ggg	ctg	agc	ctg	ggc	gcg	ccc	ggc	ggc	cgc	144
Tyr	Gln	Tyr	Ala	Gly	Pro	Gly	Leu	Ser	Leu	Gly	Ala	Pro	Gly	Gly	Arg	
		35					40						45			
gcg	ccg	ccc	gac	gac	ctg	gac	ctc	ttc	ccc	acg	ccc	gac	ccg	cac	tac	192
Ala	Pro	Pro	Asp	Asp	Leu	Asp	Leu	Phe	Pro	Thr	Pro	Asp	Pro	His	Tyr	
		50				55					60					
gag	aag	aag	tac	tac	ttc	ccg	gtg	cgc	gag	ctg	gag	cgc	tcg	ctg	cac	240
Glu	Lys	Lys	Tyr	Tyr	Phe	Pro	Val	Arg	Glu	Leu	Glu	Arg	Ser	Leu	His	
	65				70				75					80		
ttc	gac	atg	aag	ggc	gac	gac	gtg	ata	gtc	ttc	ttg	cac	atc	cag	aaa	288
Phe	Asp	Met	Lys	Gly	Asp	Asp	Val	Ile	Val	Phe	Leu	His	Ile	Gln	Lys	
			85					90						95		
acg	ggc	ggc	acc	acc	ttc	ggc	cgt	cac	ctc	gtg	cag	aac	gtg	cgc	ctc	336
Thr	Gly	Gly	Thr	Thr	Phe	Gly	Arg	His	Leu	Val	Gln	Asn	Val	Arg	Leu	
			100					105						110		
gag	gtg	ccc	tgc	gac	tgc	cgg	ccc	ggc	cag	aag	aag	tgc	acc	tgc	tac	384
Glu	Val	Pro	Cys	Asp	Cys	Arg	Pro	Gly	Gln	Lys	Lys	Cys	Thr	Cys	Tyr	
		115					120					125				
cgg	ccc	aac	cgc	cgc	gag	acc	tgg	ctc	ttc	tcc	cgc	ttc	tcc	acg	ggc	432
Arg	Pro	Asn	Arg	Arg	Glu	Thr	Trp	Leu	Phe	Ser	Arg	Phe	Ser	Thr	Gly	
		130				135					140					
tgg	agc	tgc	gga	ctg	cac	gcc	gac	tgg	acc	gag	ctc	acc	aac	tgc	gtg	480
Trp	Ser	Cys	Gly	Leu	His	Ala	Asp	Trp	Thr	Glu	Leu	Thr	Asn	Cys	Val	
		145			150				155					160		
ccc	ggc	gtg	ctg	gac	cgc	cgc	gac	ccc	gcc	gcg	ctg	cgc	acg	ccc	agg	528
Pro	Gly	Val	Leu	Asp	Arg	Arg	Asp	Pro	Ala	Ala	Leu	Arg	Thr	Pro	Arg	
			165					170						175		

aag ttc tac tac atc acc ctg ctg cga gac ccc gtg tcc cgc tac ctg 576  
Lys Phe Tyr Tyr Ile Thr Leu Leu Arg Asp Pro Val Ser Arg Tyr Leu  
180 185 190

agt gag tgg cgg cat gta cag cgg ggg gcc aca tgg aag acg tcg ctg 624  
Ser Glu Trp Arg His Val Gln Arg Gly Ala Thr Trp Lys Thr Ser Leu  
195 200 205

cac atg tgt gac ggg cgc acg ccc acc cct gag gag ctg cca ccc tgc 672  
His Met Cys Asp Gly Arg Thr Pro Thr Pro Glu Glu Leu Pro Pro Cys  
210 215 220

tac gag ggc acg gac tgg tgc ggc tgc aca ctg cag gag ttc atg gac 720  
Tyr Glu Gly Thr Asp Trp Ser Gly Cys Thr Leu Gln Glu Phe Met Asp  
225 230 235 240

tgc ccc tac aac ctg gcc aat aac cgc cag gtg cga atg ctg gcc gac 768  
Cys Pro Tyr Asn Leu Ala Asn Asn Arg Gln Val Arg Met Leu Ala Asp  
245 250 255

ctg agc ctg gtg ggc tgc tac aac ctg tcc ttc atc ccc gag ggc aag 816  
Leu Ser Leu Val Gly Cys Tyr Asn Leu Ser Phe Ile Pro Glu Gly Lys  
260 265 270

cgg tcc caa ctg ctg ctg gaa agc gcc aag aag aac ctg cgg ggc atg 864  
Arg Ser Gln Leu Leu Leu Glu Ser Ala Lys Lys Asn Leu Arg Gly Met  
275 280 285

gcc ttc ttc ggc ctg acc gag ttc cag cgc aag acg cag tac ctg ttc 912  
Ala Phe Phe Gly Leu Thr Glu Phe Gln Arg Lys Thr Gln Tyr Leu Phe  
290 295 300

gag cgg acg ttc aac ctc aag ttc atc cgg cct ttc atg cag tac aac 960  
Glu Arg Thr Phe Asn Leu Lys Phe Ile Arg Pro Phe Met Gln Tyr Asn  
305 310 315 320

agc acg cga gcg ggt ggc gtg gag gtg ggt gag gac acc atc cgg cgc 1008  
Ser Thr Arg Ala Gly Gly Val Glu Val Gly Glu Asp Thr Ile Arg Arg  
325 330 335

att gag gag ctc aac gac ctg gac atg cag ctg tac gac tac gcc agg 1056  
Ile Glu Glu Leu Asn Asp Leu Asp Met Gln Leu Tyr Asp Tyr Ala Arg  
340 345 350

gac ctc ttc cag cag cgc tat cag tac aag cgg cag ctg gag cgc cgg 1104  
Asp Leu Phe Gln Gln Arg Tyr Gln Tyr Lys Arg Gln Leu Glu Arg Arg  
355 360 365



cag cag cgc ctc cgg agc cgc gag gag cgc ctg ctg cac cgg gcc aag 1152  
 Gln Gln Arg Leu Arg Ser Arg Glu Glu Arg Leu Leu His Arg Ala Lys  
 370 375 380

gag gcg cca cct cgg ggg gac acc gag gag ccg ggc cga gtg ccc act 1200  
 Glu Ala Pro Pro Arg Gly Asp Thr Glu Glu Pro Gly Arg Val Pro Thr  
 385 390 395 400

gag gac tac atg agc cac atc atc gag aag tgg tag 1236  
 Glu Asp Tyr Met Ser His Ile Ile Glu Lys Trp  
 405 410

<210> 7

<211> 411

<212> PRT

<213> Sus scrofa

<400> 7

Met Arg Arg Arg Arg Ala Gly Ser Arg Thr Met Val Glu Arg Ala Ser  
 1 5 10 15

Lys Phe Val Leu Val Val Ala Gly Ser Ala Cys Phe Met Leu Ile Leu  
 20 25 30

Tyr Gln Tyr Ala Gly Pro Gly Leu Ser Leu Gly Ala Pro Gly Gly Arg  
 35 40 45

Ala Pro Pro Asp Asp Leu Asp Leu Phe Pro Thr Pro Asp Pro His Tyr  
 50 55 60

Glu Lys Lys Tyr Tyr Phe Pro Val Arg Glu Leu Glu Arg Ser Leu His  
 65 70 75 80

Phe Asp Met Lys Gly Asp Asp Val ile Val Phe Leu His Ile Gln Lys  
 85 90 95

Thr Gly Gly Thr Thr Phe Gly Arg His Leu Val Gln Asn Val Arg Leu  
 100 105 110

Glu Val Pro Cys Asp Cys Arg Pro Gly Gln Lys Lys Cys Thr Cys Tyr  
 115 120 125

Arg Pro Asn Arg Arg Glu Thr Trp Leu Phe Ser Arg Phe Ser Thr Gly  
 130 135 140

Trp Ser Cys Gly Leu His Ala Asp Trp Thr Glu Leu Thr Asn Cys Val

145	150	155	160
Pro Gly Val Leu Asp Arg Arg Asp Pro Ala Ala Leu Arg Thr Pro Arg			
165	170	175	
Lys Phe Tyr Tyr Ile Thr Leu Leu Arg Asp Pro Val Ser Arg Tyr Leu			
180	185	190	
Ser Glu Trp Arg His Val Gln Arg Gly Ala Thr Trp Lys Thr Ser Leu			
195	200	205	
His Met Cys Asp Gly Arg Thr Pro Thr Pro Glu Glu Leu Pro Pro Cys			
210	215	220	
Tyr Glu Gly Thr Asp Trp Ser Gly Cys Thr Leu Gln Glu Phe Met Asp			
225	230	235	240
Cys Pro Tyr Asn Leu Ala Asn Asn Arg Gln Val Arg Met Leu Ala Asp			
245	250	255	
Leu Ser Leu Val Gly Cys Tyr Asn Leu Ser Phe Ile Pro Glu Gly Lys			
260	265	270	
Arg Ser Gln Leu Leu Leu Glu Ser Ala Lys Lys Asn Leu Arg Gly Met			
275	280	285	
Ala Phe Phe Gly Leu Thr Glu Phe Gln Arg Lys Thr Gln Tyr Leu Phe			
290	295	300	
Glu Arg Thr Phe Asn Leu Lys Phe Ile Arg Pro Phe Met Gln Tyr Asn			
305	310	315	320
Ser Thr Arg Ala Gly Gly Val Glu Val Gly Glu Asp Thr Ile Arg Arg			
325	330	335	
Ile Glu Glu Leu Asn Asp Leu Asp Met Gln Leu Tyr Asp Tyr Ala Arg			
340	345	350	
Asp Leu Phe Gln Gln Arg Tyr Gln Tyr Lys Arg Gln Leu Glu Arg Arg			
355	360	365	
Gln Gln Arg Leu Arg Ser Arg Glu Glu Arg Leu Leu His Arg Ala Lys			
370	375	380	
Glu Ala Pro Pro Arg Gly Asp Thr Glu Glu Pro Gly Arg Val Pro Thr			
385	390	395	400
Glu Asp Tyr Met Ser His Ile Ile Glu Lys Trp			

<210> 8  
<211> 39  
<212> ADN  
<213> Sus scrofa

<400> 8  
gaccacgcgt atcgatgtcg actttttttt ttttttttv

39

<210> 9  
<211> 33  
<212> ADN  
<213> Sus scrofa

<400> 9  
ggaattcctc gagagcagga acgtggaaag gag

33

<210> 10  
<211> 22  
<212> ADN  
<213> Sus scrofa

<400> 10  
gaccacgcgt atcgatgtcg ac

22

<210> 11  
<211> 17  
<212> ADN  
<213> Sus scrofa

<400> 11  
gcagcagcca cgtcggg

17

<210> 12  
<211> 20  
<212> ADN  
<213> Sus scrofa

<400> 12  
tcagtgyccag tcraatgttc

20

<210> 13  
<211> 18  
<212> ADN  
<213> Sus scrofa

<400> 13  
cggngaccgc ctnatcag

18

<210> 14  
<211> 20  
<212> ADN  
<213> Sus scrofa

<400> 14  
tcagtgyccag tcraatgttc

20

<210> 15  
<211> 27  
<212> ADN  
<213> Sus scrofa

<400> 15  
attctagagg ccgaggcggc cgacatg

27

<210> 16  
<211> 19  
<212> ADN  
<213> Sus scrofa

<400> 16  
gcacccccag atcgacccc

19

<210> 17  
<211> 23  
<212> ADN  
<213> Sus scrofa

<400> 17  
caaactcctc aataaactgc acg

23

<210> 18  
<211> 48

<212> ADN  
<213> Sus scrofa

<400> 18  
ggggacaagt ttgtacaaaa aagcaggctc agcatggccg cgctgctc 48

<210> 19  
<211> 52  
<212> ADN  
<213> Sus scrofa

<400> 19  
gggaccactt tgtacaagaa agctggggtt agtgccagtc aaatgttctg cc 52

<210> 20  
<211> 19  
<212> ADN  
<213> Sus scrofa

<400> 20  
agatgactgg tcgggctgc 19

<210> 21  
<211> 23  
<212> ADN  
<213> Sus scrofa

<400> 21  
caatgatrtg gctcatgtag tcc 23

<210> 22  
<211> 25  
<212> ADN  
<213> Sus scrofa

<400> 22  
atgggtgagc gcgccagcaa gttag 25

<210> 23  
<211> 24  
<212> ADN  
<213> Sus scrofa

<400> 23 24  
ggttattggc caggttgtag gggc

<210> 24  
<211> 28  
<212> ADN  
<213> Sus scrofa

<400> 24 28  
attctagagg ccgaggcggc cgacatgt

<210> 25  
<211> 18  
<212> ADN  
<213> Sus scrofa

<400> 25 18  
ggacctcttc cagcagcg

<210> 26  
<211> 21  
<212> ADN  
<213> Sus scrofa

<400> 26 21  
gctatcagta caagcggcag c

<210> 27  
<211> 16  
<212> ADN  
<213> Sus scrofa

<400> 27 16  
ccaggctcag ccccg

<210> 28  
<211> 39  
<212> ADN  
<213> Sus scrofa

<400> 28 39  
gaccacgcgt atcgatgtcg actttttttt tttttttv

<210> 29

<211> 23

<212> ADN

<213> Sus scrofa

<400> 29

ggcaatgtcg acctccctac aac

23

<210> 30

<211> 17

<212> ADN

<213> Sus scrofa

<400> 30

tcagccccgg gcccgcg

17

<210> 31

<211> 23

<212> ADN

<213> Sus scrofa

<400> 31

ctccctacaa cccgaattcc tac

23

<210> 32

<211> 19

<212> ADN

<213> Sus scrofa

<400> 32

gccccggtac tggtagagg

19

<210> 33

<211> 56

<212> ADN

<213> Sus scrofa

<400> 33

ggggacaagt ttgtacaaaa aagcaggctt aggacaatgg tgacacatgc ggcggc

56

<210> 34

<211> 55

<212> ADN

<213> Sus scrofa

<400> 34

ggggaccact ttgtacaaga aagctgggct ctaccacttc tcgatgatgt ggctc 55